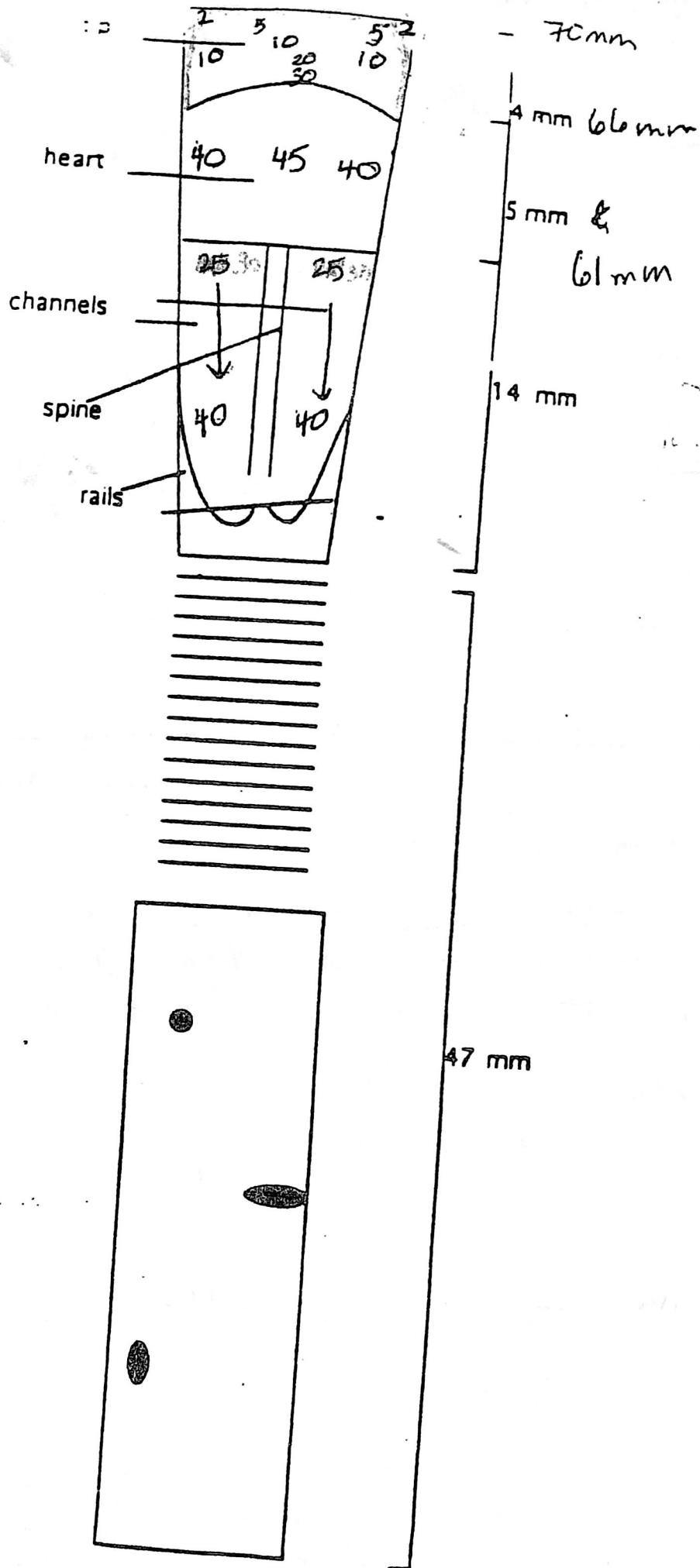


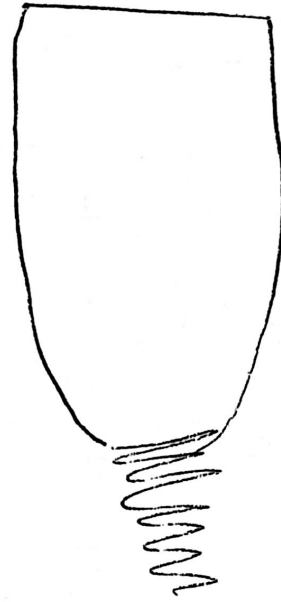
THE  
OBCE  
REED





micrometers  
(0.001mm)

# DRAW AND LABEL THE PARTS OF A REED:

KEY:  
 tip  
 heart  
 windows  
 spine  
 rails



- Tie the cane on at \_\_\_\_\_ mm, measured from the bottom of the staple.
- The staple is \_\_\_\_\_ mm long.
- The thread must not pass the top of the \_\_\_\_\_.
- The ellipsis of the cane must line up with the oval of the \_\_\_\_\_.
- The overlap goes to the \_\_\_\_\_.
- Draw a correct overlap: 
- The most important thing when tying on is that the sides \_\_\_\_\_.
- The reed has \_\_\_\_\_ symmetrical sides.

- The bottom of the tip is at \_\_\_\_\_ mm.
- The heart is about \_\_\_\_\_ mm long. So, the top of the windows is \_\_\_\_\_ mm, parts of the ~~tip~~ are the \_\_\_\_\_ and \_\_\_\_\_, and the thinnest \_\_\_\_\_.
- Draw a knife at the correct angle, if this line is a reed: 

# Reed Adjustment Charts

## 1. Reading the crow

<u>Crow produced</u>	<u>Diagnosis</u>	<u>Adjustment</u>
crow is sharp	tip too thick or short too much cane in back	thin sides of tip or lengthen blend heart into tip thin channels
crow is flat	tip is too long too much tip/heart blend too much cane scraped all over	clip tip scrape at corner of tip where heart and no remedy
single C crow	reed is closed tip is too thick or short too much cane in back	squeeze open gently thin or lengthen tip thin channels
rattling crow	too much tip/heart blend too much cane scraped	scrape at corner of tip where tip and heart no remedy
itches other than C in crow	poor balance	match scrape of both blades

## 2. General Response

<u>Response</u>	<u>Problem</u>	<u>Remedy</u>
Poor response throughout	leaks reed too thick	check for leaks thin sides of tip blend heart into tip thin channels
reed is sharp	reed too thick	thin sides of tip blend heart into tip thin channels
reed is flat	tip too long too much heart/tip blend too much cane scraped	clip tip scrape in corners of tip no remedy
reed is loud and difficult to control	opening too big	squeeze tip closed increase side slipping
reed's response is restricted	possible overwrapping	no remedy
reed is stuffy	tip corners too thick	thin tip corners

## APPENDIX I

### TROUBLE-SHOOTING CHART

The following chart offers a quick reference to the beginner to help him make adjustments to a reed which is close but not yet marvelous. Since it's impossible to second guess every little weirdness that each person reading the book might encounter, I've stuck to the standard problems which accompany the idea of reaching the best compromise of our five features: response, pitch, stability, dynamic range and tone quality. Don't be surprised to find yourself making an adjustment for one thing and then having to do something else to bring the reed back to the middle of the road.

<u>PROBLEM</u>	<u>REMEDY</u>	<u>SIDE EFFECT (good or bad)</u>
Poor response	Check for leaks, apply fishskin if needed.	Negligible
	Thin the tip	Lower pitch, lose stability, close opening, improve soft end of dynamic range, reduce loud end of range, thin sound (add reediness, buzz)
	Lightly thin the blend (corners particularly)	Free (homogenize) the vibration, lower pitch, lose stability, close opening, improve soft end of range, reduce loud end of range, mellow (soften) quality
	Thin the windows	At first, this will lower pitch. After it starts to close the opening, it will raise pitch and improve stability. Restrict 'forte'; focus quality

PROBLEM	REMEDY	SIDE EFFECTS
Reed under pitch (flat)	Chop the tip	Slow response (particularly low register), improve stability, restrict dynamic range at both ends, tighten (focus) sound
	Slip the blades more. (Trimming overlap off sides will emphasize the effects and lock them in more)	Slow response (less than chop will), improve stability, close opening, restrict range, focus sound
Reed sags in high octave (unstable) --usually accompanies flatness of pitch	Same as above, but try slipping before chopping. If chronic try narrower shape, larger diameter tube cane, or thinner gouge on sides	
Reed above pitch* (sharp)	Gently squeeze sides to open and/or un-slip blades	Lose stability, improve 'forte', free low register, could create leak
	Thin tip	Previously stated above
	Dust center of blend	Previously stated above
	Thin hump overall	Same as dusting blend; will weaken reed more.

\* A reed which has gotten "on top" usually indicates that you've gone too far somewhere. Since you can't put cane back on, the things you can do to salvage it are very limited. Better luck next time.

PROBLEM	REMEDY	SIDE EFFECTS
Reed above pitch (continued)	Lengthen tip by moving entire blend back on reed (a desperation move)  If chronic, try wider shape, smaller diameter cane, or thicker gouge	Lose stability, add buzz to tone
Reed plays loud, but not soft. (usually accom- panies poor response)	Thin everything, start with tip, then work back (test each step)	General lowering of pitch, loss of stability, weakening of reed
Reed plays soft, but not loud, feels restricted*	Squeeze sides open  Dust blend and hump lightly	Previously stated above
* Again this usually indicates having gone too far		
Reed stops for no apparent reason in middle of note	Check for leaks, apply fishskin	Negligible

PROBLEM	REMEDY	SIDE EFFECTS
Reed 'chirps' or whistles on attack*	Clip corners of tip Tiny chop off tip	Negligible Previously stated

- \* This is caused by a lost corner or by one section of the tip vibrating independently of the rest of the reed at its own very high frequency. It means you've actually got the tip, or at least a part of it, too thin. Congratulations!

## 8.2 Refining and Polishing Stages: Medium and Fine Grit Stones

For the refining stage, use a medium grit stone, and continue with the same steps on each finer grit stone for the polishing stage. Be sure to wipe the blade clean of any residue before moving to each consecutive stone.

### Step 1 Back Face Relief – Dime



1. Right Hand: Hold the knife in your right hand with the blade facing away from your body.  
Left Hand: Hold the knife in your left hand with the blade facing away from your body.
2. Using a dime, place the knife on the stone in the starting position.
3. Sharpen until there is an even layer of new scratches, or about 10-30 strokes. A burr should not form.

### Step 2 Back Face Edge – Nickel



1. Right Hand: Hold the knife in your right hand with the blade facing away from your body.  
Left Hand: Hold the knife in your left hand with the blade facing away from your body.
2. Using a nickel, place the knife on the stone in the starting position.
3. Sharpen until a burr forms on the top side of the blade.

### Step 3 Front Face – Dime



1. Right Hand: Hold the knife in your right hand with the blade facing toward your body.  
Left Hand: Hold the knife in your left hand with the blade facing toward your body.
2. Using a dime, place the knife on the stone in the starting position.
3. Sharpen until a burr forms on the top side of the blade.

### Step 4 Wipe off the Excess Burr From the Back Face – Nickel



1. Right Hand: Hold the knife in your right hand with the blade facing away from your body.  
Left Hand: Hold the knife in your left hand with the blade facing away from your body.
2. Using a nickel, place the knife on the stone in the starting position.
3. Take one forward pass only. The burr should form evenly along the front face of the edge.

Complete these steps on each ascending grit stone. When the process is finished on the finest stone, it is highly recommended to first go to Chapter 9 on page 26 to personalize the burr. Otherwise, the knife is now ready for scraping reeds.



After a reed knife has been sharpened on the finest sharpening stone, the final step is to personalize the burr with the Folding Steel from the Jende Reed Knife Maintenance Kit. This is an optional step, but one that is strongly recommended. The folding steel is used to position the burr so that it makes more effective scrapes, and it is used to reposition any remaining burr on a knife without sharpening, thus considerably extending the life of the burr and the knife. If the folding steel is only used once before sharpening, the life of the knife has doubled.

To maintain the burr, follow the steps for a right or left handed burr until the burr is no longer satisfactory. When steeling the knife no longer produces the desired results, sharpen the knife beginning with either the shaping or refining stage.

## 9.1 Right-Handed Burr

*Best remembered as Right-Left-Right*

**Step 1:** Open the arms of the folding steel so that the inside of the rods evenly line up to the point of the arrows (see Figure 9A).

**Step 2:** Place the rods on a flat surface or table. The handle should be perpendicular to the table.

**Step 3:** With the knife in your right hand, place the blade on the right arm of the steel nearest the ferrule with the spine in a 12 o'clock position (see Figure 9D). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body. (see Figure 9E). The blade should "flick" inward slightly after the length of the blade has been steeled (see Figure 9F).

**Step 4:** Place the blade on the left arm of the steel nearest the ferrule with the spine in a 12 o'clock position (see Figure 9G). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body (see Figure 9H). The blade should "flick" inward slightly after the length of the blade has been steeled (see Figure 9J).

**Step 5:** Place the blade on the right arm of the steel nearest the ferrule with the spine in the preferred position\* (see Figure 9B). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body. The blade should "flick" inward slightly after the length of the blade has been steeled.

The burr is now positioned for a right handed scrape.

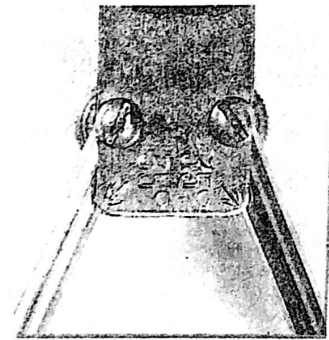


Figure 9A  
The arms of the steel are lined up with the points of the arrows.

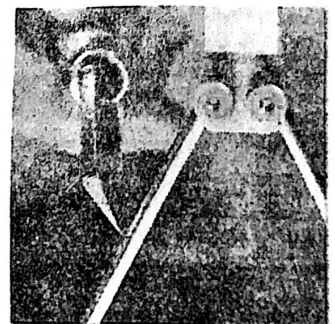


Figure 9B  
Step 5 with the spine of the knife turned to the user's 1 o'clock position.

\* Depending on how much wrist is used when making a scrape, Step 5 can be changed to a 12:30, 1:00, 1:30, or 2 o'clock position for a right handed burr, or to a 11:30, 11:00, 10:30, or 10 o'clock position for a left handed burr. It is recommended to experiment to find which final angle works best for you, each time starting with Step 3 and ending on Step 5 at a new angle. Once the best angle is determined, Step 5 should be taken at the preferred angle only.

## 9.2 Left Handed Burr

*Best remembered as Left-Right-Left*

**Step 1:** Open the arms of the folding steel so that the inside of the rods evenly line up to the point of the arrows (see Figure 9A).

**Step 2:** Place the rods on a flat surface or table. The handle should be perpendicular to the table.

**Step 3:** With the knife in your left hand, place the blade on the left arm of the steel nearest the ferrule with the spine in a 12 o'clock position (see Figure 9G). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body (see Figure 9H). The blade should "flick" inward slightly after the length of the blade has been steeled (see Figure 9J).

**Step 4:** Place the blade on the right arm of the steel nearest the ferrule with the spine in a 12 o'clock position (see Figure 9D). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body (see Figure 9E). The blade should "flick" inward slightly after the length of the blade has been steeled (see Figure 9F).

**Step 5:** Place the blade on the left arm of the steel nearest the ferrule with the spine in the preferred position† (see Figure 9C). Keeping the edge in constant contact with the arm of the steel, slowly draw the knife toward your body. The blade should "flick" inward slightly after the length of the blade has been steeled.

The burr is now positioned for a left-handed scrape.

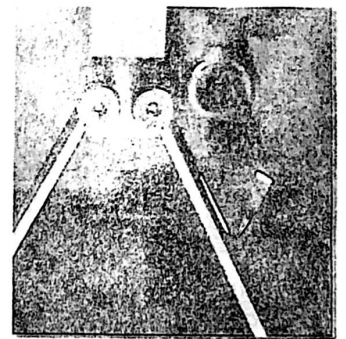


Figure 9C  
Step 5 with the spine of the  
knife turned to the user's  
11 o'clock position.

† See \* on page 26.



Figure 9D

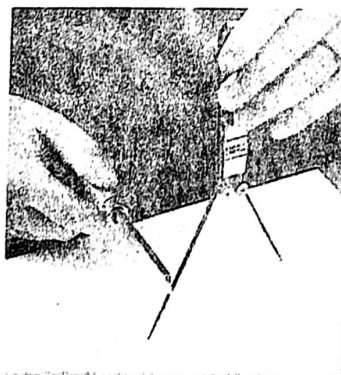


Figure 9E

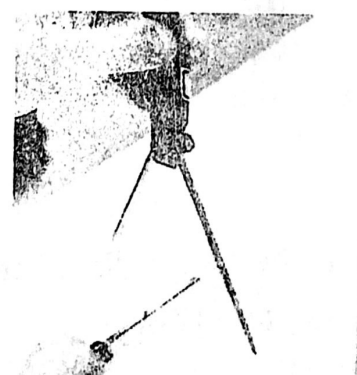


Figure 9F

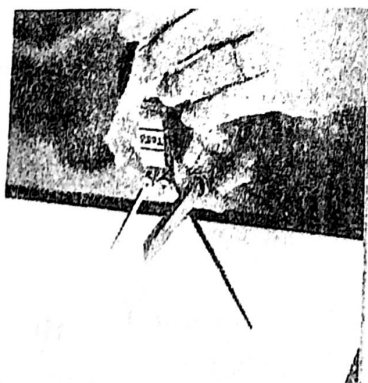


Figure 9G

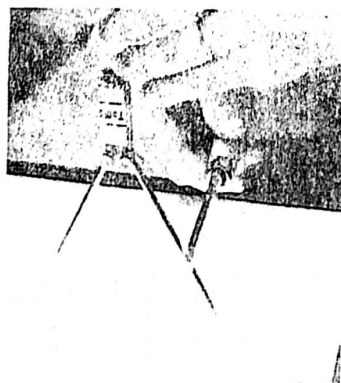


Figure 9H



Figure 9J